

Relicensing Study R-8 Recreation Carrying Capacity

Work Group Presentation

June 24, 2004

Introduction

- Need for Study/Study Objective
- Methodology
- Results
- Conclusions



Need for Study/Study Objective

- Study results support development of FERC required comprehensive recreation plan
- Study results help address the adequacy of existing Project recreation facilities and use area capacity to accommodate current and potential future use levels

Methodology

“the level of use beyond which impacts exceed standards”



(Shelby and Heberlein 1986)

Capacity Indicators

- Ecological
- Spatial
- Facility
- Social



Ecological Capacity

Concerned with the impacts of recreation on the ecosystem, such as the percent of impacted ground cover and the amount of observed soil compaction and soil erosion.

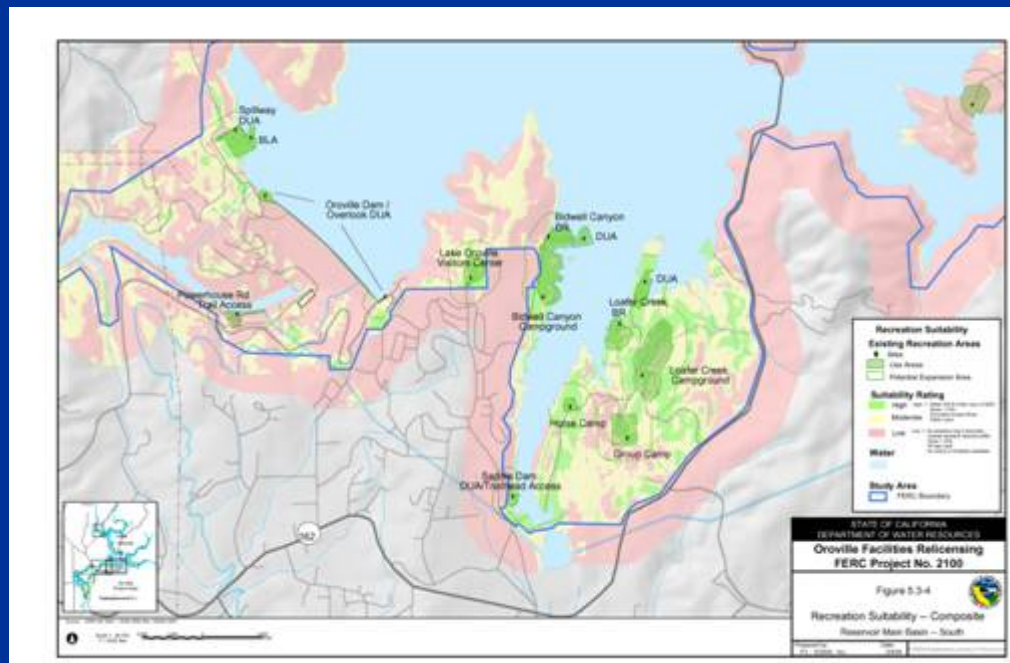


Ecological Capacity

Capacity Level	R-11 Study
	Observed Level of Impact
Below	Low or No Concern
Approaching	Moderate Concern
At	High Concern
Exceeding	Extreme Concern

Spatial Capacity

Concerned with the impact of available space on recreation, such as number of visitors in a given area, or the availability of adjacent areas for site expansion.



Spatial Capacity

Capacity Level	R-15 Study Expansion Potential	R-9 Study Use/Facility Density
Below	Multiple areas for expansion	High ability to absorb use
Approaching	Some areas for expansion	Moderate ability to absorb use
At	Few areas for expansion	Limited ability to absorb use
Exceeding	None	None

Facility Capacity

Concerned with facility impacts, such as number of people, groups, or vehicles per boat ramp, restroom, parking lot or campground, percent occupancy for various facilities, waiting time to use facilities, and the number of campground refusals.



Facility Capacity

Capacity Level	R-9 Study % Occupancy Weekday	R-9 Study % Occupancy Weekend/ Holiday
Below	<40%	<60%
Approaching	40 to 59%	60 to 79%
At	60%	80%
Exceeding	>60%	>80%

Social Capacity

Concerned with visitors' perceptions of surrounding recreational use. Considers factors such as perceived crowding, number of encounters with groups of a particular size or type, and other conflicts.



Social Capacity

Capacity Level	R-13 Study
	Perceived Crowding Score
Below	<3.0
Approaching	3.1 to 4.5
At	4.6 to 6.0
Exceeding	>6.0

Overall Site Capacity

Overall Capacity Level	Overall Capacity Priority
Below	Low
Approaching	Moderate
At or Exceeding	High

Results

- Campgrounds
- Boat-in campsites and floating campsites
- Day use areas
- Boat ramps and associated day use areas
- Trails

Campgrounds

Overall Capacity:

Approaching

Management Priority:

Moderate

Limiting Factor(s):

Spatial and Facility

BICs and Floating Campsites

Overall Capacity: Below

Management Priority: Low

Limiting Factor(s): Facility

Day Use Areas

Overall Capacity: Approaching

Management Priority: Moderate

Limiting Factor(s): Spatial

BRs and Associated DUAs

Overall Capacity: Approaching

Management Priority: Moderate

Limiting Factor(s): Facility

Trails

Overall Capacity: Below

Management Priority: Low

Limiting Factor(s): None

Overall Study Area

Overall Capacity: Approaching

Management Priority: Moderate

Limiting Factor(s): Spatial and Facility

Conclusions

Ecological Capacity

- Below Capacity
- Site-specific concerns at: OWA (Afterbay Outlet ramp, primitive camping area, and Rabe Road Shooting Area), Clay Pit SVRA, and Foreman Creek Car-top boat ramp

Ecological Capacity

Potential management actions include (one or more may be appropriate):

- Increased O&M
- Site hardening
- Natural barriers
- Increased visitor education and information
- Additional enforcement
- Site closure/rehabilitation

Spatial Capacity

- Approaching capacity
- Limiting factor
- 19 recreation sites are considered to be at or exceeding spatial capacity

Spatial Capacity

Potential management actions/concerns include (one or more may be appropriate):

- Study area has a finite amount of land for potential development
- Demand to develop land is anticipated to increase
- Recognize value of undeveloped lands for aesthetics and recreation
- Focus potential future development at existing sites or already disturbed areas

Facility Capacity

- Approaching capacity
- Limiting factor
- Currently, only 5 recreation sites considered to be at or exceeding facility capacity
- However, facility capacity is a limiting factor at 24 recreation sites

Facility Capacity

Potential management actions include (one or more may be appropriate):

- Construct 50 to 100 new campsites
- Construct 350 new parking spaces
- Enhance under-utilized sites
- Redistribute use
- Institute a limited entry system

Social Capacity

- Approaching capacity
- Site-specific concerns at: Afterbay Outlet boat ramp and OWA primitive camping area

Social Capacity

Potential management actions include (one or more may be appropriate):

- Provide a range of social opportunities
- Create adequate buffers between user groups and sites
- Implement temporal or spatial zones by activity type or user group
- Provide additional enforcement presence

Future Capacity Monitoring

Potential monitoring objectives could include:

- Public use
- Recreation impacts
- Percent occupancy
- Visitor crowding and conflict

Questions?